



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/771,454	02/05/2004	Alberto Nicoletti	108910-00121	2955
4372	7590	08/08/2008		
AREN'T FOX LLP			EXAMINER	
1050 CONNECTICUT AVENUE, N.W.			COONEY, JOHN M	
SUITE 400				
WASHINGTON, DC 20036			ART UNIT	PAPER NUMBER
			1796	
			NOTIFICATION DATE	DELIVERY MODE
			08/08/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DCIPDocket@arentfox.com  
IPMatters@arentfox.com  
Patent\_Mail@arentfox.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/771,454	<b>Applicant(s)</b> NICOLETTI ET AL.
	<b>Examiner</b> John Cooney	<b>Art Unit</b> 1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 16 June 2008.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1 and 3-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1 and 3-20 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO/DS/06)  
 Paper No(s)/Mail Date \_\_\_\_\_
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date \_\_\_\_\_
- 5) Notice of Informal Patent Application  
 6) Other: \_\_\_\_\_

***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6-16-08 has been entered.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 3-17, 19, and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims are confusing as to intent because it can not be determined what amounts of HFC 365mfc are intended to be defined by the ranges of values set forth in claims 1 and 3. The relevance of these ranges of values can not be determined because they are based on an amount of a component which is not included in the claim.

Relatedly, these claims are confusing as to intent because of the following:

Claim 1 recites the limitation "from 5 to 8 parts by weight/100 parts of polymeric foam" in the 3<sup>rd</sup> line. There is insufficient antecedent basis for this limitation in the claim.

This referred to component lacks sufficient antecedent basis in the claims, and the statement of intended use in the preamble does not constitute sufficient antecedent basis for this component in the claims to adequately render the claims definite. There is not sufficient antecedent basis for the term "polymeric foam" in the claims for the ranges of values defined by the claims to be definite.

Claim 3 recites the limitation "the compounds of formula (I) ranges from 0.2 to 1.5 parts by weight referred to 100 parts by weight of polyol and HFC 365mfc amount ranges from 20-25 parts by weight /100 parts by weight of polyol" in the 2<sup>nd</sup> to 4<sup>th</sup> line. There is insufficient antecedent basis for this limitation in the claim.

There is not sufficient antecedent basis for the term "polyol" in the claim for the ranges of values defined by the claims to be definite.

Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 10 is confusing as to intent because it attempts to include other components within the metes and bounds of claim 1 from which it depends that is closed to the inclusion of additional components, including those that the claim is attempting to include.

The transitional phrase "consisting of" excludes any element, step, or ingredient not specified in the claim. *In re Gray*, 53 F.2d 520, 11 USPQ 255 (CCPA 1931); *Ex*

*parte Davis*, 80 USPQ 448, 450 (Bd. App. 1948). ... A claim which depends from a claim which "consists of" the recited elements or steps cannot add an element or step.{see also M.P.E.P. 2111.03 [R-3]}.

If applicants intend to define the a composition consisting of the components of claim 1 and claim 10, then the claim needs to be redrafted as an independent claim reflecting such intents.

Claims 11-17 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims are confusing as to intent because it can not be determined what elements and/or process steps are intended to be included or excluded by the products and processes as defined.

The transitional phrase "consisting of" excludes any element, step, or ingredient not specified in the claim. *In re Gray*, 53 F.2d 520, 11 USPQ 255 (CCPA 1931); *Ex parte Davis*, 80 USPQ 448, 450 (Bd. App. 1948). ... A claim which depends from a claim which "consists of" the recited elements or steps cannot add an element or step.{MPEP 2111.03 [R-3]}.

Claim 18 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 18 is confusing as to intent because it depends from a claim that has been cancelled.

Claims 1 and 3-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 3,10, and 18 contains the trademark/trade name HFC 365mfc. Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe the blowing agent 1,1,1,3,3-pentafluorobutane and, accordingly, the identification/description is indefinite.

Claim 1 needs to insert the language ", 1,1,1,3,3-pentafluorobutane," after the first usage of "HFC365mfc" in claim 1.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 11-17 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kruecke et al.(6,080,799) in view of Moore et al.(5,658,962).

Kruecke et al. discloses preparations of polyurethane foams prepared from blowing agent combinations of 1,1,1,3,3-pentafluorobutane and other hydrofluorocarbons, and/or other blowing agents as desired (see column 3 lines 45-53, as well as, the entire document).

Kruecke et al. differs from applicants' claims in that hydrofluoroalkyl ethers and/or other hydrofluoro-compounds as claimed by applicants are not particularly required. However, Moore et al. discloses these compounds, having boiling points, structures, and molecular weights as claimed based on their molecular make-ups, to be useful in polymeric foam preparations for the purpose of imparting acceptable foaming effects

(see column 4 lines 10-12, and column 23, as well as, the entire document).

Accordingly, it would have been obvious for one having ordinary skill in the art to have employed the blowing agents of Moore et al. in the preparations of Kruecke et al. for the purpose of imparting their acceptable blowing and cell regulating effect in order to arrive at the products and/or processes of applicants' claims with the expectation of success in the absence of a showing of new or unexpected results. Additionally, as to the variations in the amounts of these respective species, it has long been held that where the general conditions of the claims are disclosed in the prior art, discovering the optimal or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233; *In re Reese* 129 USPQ 402 , and it has been held that discovering the optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272,205 USPQ 215 (CCPA 1980).

As to other blowing agents not particularly provided for by Kruecke et al., one looking to employment of other blowing gases in the practice of the invention of Kruecke et al. would look to the blowing gases of Moore et al. with the expectation of successful function in their role as blowing agents such that such a modification would have been obvious to one having ordinary skill in the art.

The following previous arguments are all maintained:

The following arguments were set forth in the Office action mailed 2-3-06:

Applicants' arguments have been considered, but rejection is maintained for the reasons set forth in the previous Office action. Applicants' arguments concerning behaviors of blowing agents in the art, foam failures in prepared compositions of their disclosure, and other comparative disclosures have been considered. However, these

Art Unit: 1796

disclosures do not demonstrate examiner's position of *prima facie* obviousness to fail based on the combination of references as set forth. Further, applicants' showings of results fail to set forth a persuasive, factually supported, showing of new or unexpected results attributable to the combinations of their claims which are commensurate in scope with the scope of their claims. Further, evidence of unexpected properties must be demonstrated to be more significant than expected properties in order to rebut a *prima facie* case of obviousness.

That Kruecke et al.'s disclosure may be directed towards employment of binary azeotropic elements is not a feature excluded from applicants' claims, and employment of such elements does not negate Kruecke et al.'s further provision for the employment of additional blowing gases (column 3 line 54).

These arguments are maintained.

The following arguments were set forth in the Office action mailed 9-19-2006:

Applicants' latest arguments have been considered, but rejection is maintained to be proper for the reasons set forth above.

When considering showings of new or unexpected results, the following must be considered:

#### Result Must Compare to Closest Prior Art:

Where a definite comparative standard may be used, the comparison must relate to the prior art embodiment relied upon and not other prior art – *Blanchard v. Ooms*, 68 USPQ 314 – and must be with a disclosure identical (not similar) with that of said embodiment: *In re Tatincloux*, 108 USPQ 125.

#### Results Must be Unexpected:

Unexpected properties must be more significant than expected properties to rebut a *prima facie* case of obviousness. *In re Nolan* 193 USPQ 641 CCPA 1977.

Obviousness does not require absolute predictability. *In re Miegel* 159 USPQ 716.

Since unexpected results are by definition unpredictable, evidence presented in comparative showings must be clear and convincing. *In re Lohr* 137 USPQ 548.

In determining patentability, the weight of the actual evidence of unobviousness presented must be balanced against the weight of obviousness of record. *In re Chupp*, 2 USPQ 2d 1437; *In re Murch* 175 USPQ 89; *In re Beattie*, 24 USPQ 2d 1040.

#### Claims Must be Commensurate With Showings:

Evidence of superiority must pertain to the full extent of the subject matter being claimed. *In re Ackerman*, 170 USPQ 340; *In re Chupp*, 2 USPQ 2d 1437; *In re Murch* 175 USPQ 89; *Ex Parte A*, 17 USPQ 2d 1719; accordingly, it has been held that to overcome a reasonable case of *prima facie* obviousness a given claim must be

Art Unit: 1796

commensurate in scope with any showing of unexpected results. *In re Greenfield*, 197 USPQ 227. Further, a limited showing of criticality is insufficient to support a broadly claimed range. *In re Lemin*, 161 USPQ 288. See also *In re Kulling*, 14 USPQ 2d 1056.

Applicants' have not persuasively demonstrated unexpected results for the combinations of their claims. Applicants have not demonstrated their results to be clearly and convincingly unexpected and more than mere optimizations of the knowledge in the art or more significant than being secondary in nature. Applicants' have not demonstrated their showing to be commensurate in scope with the scope of combinations now claimed.

Applicants' have not factually supported their allegation of unexpected non-foaming behavior of the hydrofluoroethers of applicants' claims when combined with HFC 365mfc. Nor have they demonstrated such unexpected effects in a manner which is commensurate in scope with the scope of the claims as they currently stand, nor have they shown these effects to be, in fact, unexpected and/or more significant than the expected effects attributable to their inclusion in the combinations of Kruecke et al.

Merely stating that Moore et al. discloses a use for their disclosed hydrofluoroethers rather than being inert as alleged by applicants in their combinations does not rebut examiner's position of obviousness, nor does it relieve applicants' of their burden to come forward with a showing of new or unexpected results which are commensurate in scope with the scope of their claims and unexpected results which are more significant than the evidence of expected results of record.

These arguments are maintained.

Applicants' latest arguments have been considered. However, rejection is maintained. Rejection does not fail because Kruecke et al. lacks the features indicated in the rejection. Moore et al. is properly looked to in order to resolve the deficiencies of Kruecke et al. The overlap in ranges of boiling point values between Moore et al. and applicants' claims is substantial and to a degree that distinctness based on this claim feature is not evident and rejection doesn't fail.

Examiner maintains his positions set forth above regarding showings are proper and will not be repeated here. It is maintained that applicants' showings fail to be commensurate in scope with the claims. To be commensurate in scope, showings must make comparisons using representative polymeric foam compositions and representative fluid compositions which are commensurate in scope with the scope of the claimed invention. Though applicants' do not necessarily need to make comparisons with HFC 365mfc and fluorinated compounds of Moore et al. outside the ranges of values of applicants' claims (meaning comparatives with HFC 365mfc alone may be acceptable), showings of new and unexpected results do need to clearly and convincingly show results to be unexpected and more significant than the evidence of expected results of record. Accordingly, it appears that fact based and original disclosure supported showings including comparisons such as blends of the instantly claimed fluorinated compounds combined with compounds similar to HFC 365mfc

would be required to demonstrate the inert behavior alleged by applicants is, in fact, new or unexpected and more significant than the evidence of expected results of record.

Any comparative showings that are presented must be commensurate in scope with the claims and demonstrate new and unexpected results that are more significant than the evidence of expected results of record.

Further, rejection over the combination of teachings set forth above is maintained to be proper for all of the reasons set forth, again, above. The cited references are maintained to be analogous art and properly combined with motivation to combine being evident and proper for the reasons as set forth above, and a sufficient showing of new or unexpected results has not been presented. Further, distinction based on the ranges of ratios of amount values is maintained to be not evident.

The wording of the rejection has been clarified to reflect the included components of the prior art. However, the basis of the rejection is maintained as set forth above, and has not been overcome by applicants' arguments on reply. Arrival at the invention of applicants' claims based on the combined teachings of the above cited prior art is maintained to be evident as set forth above. One looking to employment of other blowing gases in the practice of the invention of Kruecke et al. would look to the blowing gases of Moore et al. with the expectation of successful function in their role as blowing agents.

Further, it is held and maintained that applicants have not provided comparative showings that are commensurate in scope with the claims and demonstrate new and unexpected results that are more significant than the evidence of expected results of record.

Applicants' latest arguments have been considered. However, rejection is maintained. The rejected claims do not require the exclusions referred to in applicants' reply. Additionally, when the phrase "consists of" appears in a clause of the body of a claim, rather than immediately following the preamble, it limits only the element set forth in that clause; other elements are not excluded from the claim as a whole. *Mannesmann Demag Corp. v. Engineered Metal Products Co.*, 793 F.2d 1279, 230 USPQ 45 (Fed. Cir. 1986). >See also *In re Crish*, 393 F.3d 1253, 73 USPQ2d 1364 (Fed. Cir. 2004). {MPEP 2111.03 [R-3]}.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Cooney whose telephone number is 571-272-1070. The examiner can normally be reached on M-F from 9 to 6. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidlek, can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/John Cooney/

Primary Examiner, Art Unit 1796

<b>Application Number</b> 	<b>Application/Control No.</b>	<b>Applicant(s)/Patent under Reexamination</b>
	10/771,454 <b>Examiner</b> John Cooney	NICOLETTI ET AL. <b>Art Unit</b> 1796